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Electronic Submission

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street S.W.
Washington, D.C. 20554

Re: Developing a Unified Intercarrier Compensation Regime, CC Docket No. 01-92; High-Cost Universal Service Support, WC Docket No. 05-337; Federal-State Joint Board on Universal Service, CC Docket No. 96-45; Intercarrier Compensation for ISP-Bound Traffic, WC Docket No. 99-68; Establishing Just and Reasonable Rates for Local Exchange Carriers, WC Docket No. 07-135

In this letter, AT&T responds to the deeply flawed response made by NuVox[1] to the softswitch information AT&T filed in the record on October 13, 2008.[2] The Commission should reject NuVox's attempts to include costs that result from its own inefficiencies in the costs of transport and termination that are recovered from interconnecting carriers like AT&T and their customers. AT&T will explain below why the information it filed previously provides a more representative depiction of the costs to terminate voice calls on softswitches than the inflated numbers provided by NuVox.

Total investment associated with a softswitch.

First, in its October 13, 2008 letter, AT&T compared the investment costs of a Class 5 switch to the costs of a softswitch. As noted by NuVox, AT&T's letter contained a typographical error: AT&T stated that the Commission previously concluded that the fixed costs for a Class 5 host switch were $468,700. Instead, the Commission found that this cost was $486,700, which increases the per line cost of the average Class 5 switch by $1 to $129. This error induced no perceptible error in AT&T's reported cost results.

Second, AT&T conservatively assumed that price reductions in the switching industry were exceedingly modest between 2000 and 2008. NuVox disputes this

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[1] Letter from John Heitmann, Counsel to NuVox, to Marlene Dortch, FCC, CC Docket No. 01-92 (filed Oct. 24, 2008) (attaching a declaration from Ankum, Coker, and Webber). Subsequent references are to the declaration.

[2] Letter from Henry Hultquist, AT&T, to Marlene Dortch, FCC, CC Docket Nos. 01-92, 96-45, WC Docket Nos. 05-337, 99-68, 07-135 (filed Oct. 13, 2008) (AT&T October 13, 2008 Letter).

assumption and cites an AUS TPI bulletin to support its claim that switching prices are "essentially at the same level as they were in the 1999-2000 timeframe."[3] NuVox's suggestion is not convincing. As an initial matter, the Commission previously considered and rejected relying on TPI values (then called Turner Price Index) to account for changes in switching costs over time.[4] Additional surveys and analyst reports also refute NuVox's contention that switching prices have remained constant since 2000. For example, according to a Federal Reserve Board survey, switching prices may have decreased by 19.5 percent per year from 2000 to 2005.[5] Thus, AT&T's 3 percent per year reduction in the cost of Class 5 switching equipment is plainly a conservative estimate.

Third, it was appropriate for AT&T to rely on softswitch manufacturers' literature to compare the capital and operating expenses of a Class 5 switch to a softswitch. While NuVox claims that its "initial" softswitch cost savings were smaller than anticipated, it is unclear what NuVox means by its "initial" savings and, in any event, one CLEC's alleged experience is not indicative of the cost savings that may be experienced by an entire industry. Moreover, contrary to being mere sales puffery, the cost savings statistics contained in the softswitch literature cited in AT&T's October 13, 2008 letter are supported by analyst studies.[6]

Fourth, NuVox seeks to inflate its purported costs by including "ancillary equipment" that is not relevant in a forward looking network, unnecessary for the basic termination of voice calls, or not traffic sensitive. Even NuVox acknowledges this point, as it must, when it excludes multiplexer costs from its per line cost estimate.[7] It should

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[3] NuVox Declaration at 7.

[4] *Tenth Report and Order*, 14 FCC Rcd 20156, para. 314 (1999). The AUS TPI is a proprietary reproduction cost index (*i.e.*, the cost of reproducing a carbon copy of the multi-vintage telephone plant existing in a particular year). The FCC has previously rejected its usage for developing TELRIC rates because it is nonpublic and because it develops reproduction costs – not the efficient replacement costs that are the hallmark of TELRIC.

[5] *See* Table 4 at http://www.nber.org/~confer/2007/si2007/PRCR/byrne.pdf.

[6] For example, industry research firm Heavy Reading recently concluded that the Opex cost savings associated with softswitches are significant. *See* page 6 of the following White Paper: http://downloads.lightreading.com/wplib/alcatellucent/ALU_Ntwk_Transform_wp.pdf (determining, for example, that the annual power consumption savings of a softswitch versus a circuit switch is almost 90 percent). In addition, as stated in AT&T's October 13, 2008 letter, manufacturer Ericsson noted a 50 percent reduction in softswitch operating costs.

[7] NuVox Declaration at 10 & n.19. Multiplexers are not switching related and thus are correctly excluded from the switching cost analysis.

have excluded the other ancillary components listed in its declaration as well: routers, servers, session border controllers (SBCs), and signaling gateways.[8] Given the presence of softswitches, routers are necessary only for transport and, as NuVox notes in its declaration, AT&T's filing concerned only the costs of terminating (and not transporting) voice calls. Application servers are unnecessary for basic voice call processing. And the softswitches (e.g., the CopperCom and the Taqua 7000) presented in AT&T's October 13, 2008 letter include SBC functionality and thus additional SBC costs are unnecessary and duplicative. Finally, signaling gateways are irrelevant in a forward-looking all-softswitch environment (which will be entirely IP SIP and thus there will be no need to interface with legacy SS7) and should be excluded from the cost calculation.

Fifth, NuVox includes in its per line cost estimate its costs of transport, whereas AT&T's filing focused on termination costs. For this reason, the Commission cannot compare AT&T's calculated local switching cost per minute to NuVox's "total cost per minute" estimate because the latter includes transport costs, softswitch to TDM hand-off, and shared and common costs.[9]

Sixth, NuVox provides no basis for increasing AT&T's switching annual charge factor from 25 percent to 35 percent. As AT&T noted, its proposed 25 percent figure already substantially exceeds the Commission's figure of 19.1 percent adopted for switching. The extra 6 percentage points that AT&T includes should be adequate to account for any necessary extra costs. In any event, NuVox provides no explanation for 25 percent being the basis upon which to add an extra 10 percentage points.

In sum, other than correcting a typographical error, which has no effect on the figures previously filed, the assumptions AT&T made to establish softswitch investment costs remain valid and are corroborated by industry and governmental reports and surveys.

Portion of the softswitch investment costs that are traffic sensitive:

In its October 13, 2008 letter, AT&T cites to testimony provided by Dr. Kent Currie before the Michigan Public Service Commission to support AT&T's assertion that no more than 20 percent of softswitch investment costs are traffic sensitive. NuVox asserts that Dr. Currie's testimony that a CopperCom softswitch's costs are less than 20 percent traffic sensitive is counter to his later recommendation in this testimony that the Michigan Commission should find that *50* percent of this switch's cost are traffic sensitive for the purposes of developing MECA's reciprocal compensation rate. In fact,

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[8] *Id.* at 10-11.

[9] *Id.* at 36. Even though NuVox's methodology is fatally flawed for reasons provided above, if one were to attempt an "apples to apples" comparison, one would total the amounts listed on lines 1, and 4-9 of the chart provided on page 36 of the declaration and exclude lines 2-3, 10-12.

there is no contradiction between Dr. Currie's analytic finding that the CopperCom softswitch's costs were less than 20 percent traffic sensitive and his subsequent 50 percent ratemaking recommendation. Rather, the latter recommendation was compelled by the Michigan Commission's unique cost categorization rules – and relies on Dr. Currie's cost analytics (and does not contradict them).

Specifically, Dr. Currie's examination of the cost-causative structure of the CopperCom softswitch led him to conclude that no more than 20 percent of its total costs could be completely characterized as directly line-driven, and an even smaller portion of its total costs could be completely characterized as directly usage-driven. The remaining fraction of the switch's total costs (some portion greater than 60 percent) were then considered to be fixed costs or costs that were shared between lines and usage. But the Michigan Commission's TSLRIC ratemaking rules require in these circumstances that these fixed or shared costs be allocated residually between lines and usage, and allocating these fixed or shared costs in the same proportion as direct line-driven and usage-driven costs is a reasonable way to satisfy this Michigan-specific requirement. Thus, because Dr. Currie found direct line-driven and usage-driven costs to be roughly equal (even though usage-driven was slightly smaller than line-driven), this caused him to recommend a 50/50 split of total costs between lines and usage.

The Commission's TELRIC ratemaking rules are different, however. Rather than requiring a residual allocation of fixed and shared costs, the Commission found in its *Virginia Arbitration Cost Order* that such fixed and shared costs should be allocated entirely to lines.[10] Thus, based on this Commission's ratemaking rules, Dr. Currie's analytics suggest unambiguously that the CopperCom softswitch should be considered no more than 20 percent traffic sensitive for ratemaking purposes.

In rejecting AT&T's 20 percent traffic sensitive figure, NuVox erroneously asserts that softswitches should be "treated the same way as tandem switch [sic] has been treated in the circuit switched environment – *i.e.,* as 100% usage sensitive investment . . . ."[11] NuVox is incorrect when it attempts to bootstrap a tandem switch cost structure to an end office softswitch cost structure. Tandem switches switch voice packets from trunks to trunks while end office softswitches switch voice packets from lines to trunks and from lines to lines. As we noted in our October 13, 2008 letter, end office softswitches, like the Taqua 7000, are completely modular and their capabilities scale strictly with lines. NuVox provides no basis for asserting that traffic sensitive switching costs range between 80 to 100 percent of total end office softswitch costs and its declaration is noticeably

[10] *Virginia Arbitration Cost Order*, 18 FCC Rcd 17722, paras. 463-83 (WCB 2003).

[11] NuVox Declaration at 15.

silent with respect to AT&T's statement that the Taqua softswitch appears to have no traffic sensitive costs.[12]

AT&T's October 13, 2008 letter provided the Commission with a reasonable range of per minute switching costs associated with a softswitch. Other than correcting a typographical error, NuVox's criticisms of AT&T's assumptions and methodology miss the mark. The Commission should reject NuVox's efforts to inflate its alleged softswitching costs with "ancillary" costs and costs incurred due to NuVox's inefficient operations; instead, the Commission should rely on the information contained in AT&T's filing.

Sincerely,

/s/ Henry Hultquist

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[12] AT&T October 13, 2008 Letter at 4.